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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/073,112

02/12/2002

Susumu Igarashi

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08/23/2006

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EXAMINER

DANG, DUY M

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/073,112

Applicant(s)

IGARASHI ET AL.

Examiner

Duy M. Dang

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5,7,23 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,23 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on May 05, 2006 has been entered.

2. Claims 1, 3, 5, 7, 23, and 25 are currently pending.

### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005).

4. Claim 23 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 23 is drawn to a computer implemented process that merely manipulates data or an abstract idea, or merely solves a mathematical problem without a limitation to a practical application in the technological arts.

In order for a claimed invention to accomplish a practical application, it must produce a "useful, concrete and tangible result" *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02 (see MPEP 2106.II.A). A practical application can be achieved through recitation of "a physical transformation outside the computer for which a practical application in the technological arts is

Art Unit: 2624

either disclosed in the specification or would have been known to a skilled artisan”, or “limited to a practical application within the technological arts” (MPEP 2106 IVB2(b)). Currently, claim 23 meets neither of these criteria. In order to for the claimed process to produce a “useful, concrete and tangible” result, recitation of one or more of the following elements is suggested:

- The manipulation of data that represents a physical object or activity transformed from outside the computer (MPEP 2106 IVB2(b)(i)).
- A recitation of a physical transformations outside the computer, for example in the form of pre or post computer processing activity (MPEP 2106 IVB2(b)(i)).
- A direct recitation of a practical application in the technological arts (MPEP 2106 IVB2(b)(ii)).

5. Claim 25 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 25 is drawn to functional descriptive material embodied on a computer readable medium (i.e., “data structures and computer programs which impart functionality when employed as a computer component” at MPEP 2106.IV.B(1)). However, the program/algorithm itself merely manipulates data or an abstract idea, or merely solves a mathematical problem without a limitation to a practical application in the technological arts.

MPEP 2106.IV.B.2(a) (Statutory Product Claims) states:

“A claim limited to a ... manufacture, which has a practical application in the technological arts, is statutory.”

In order for a claimed invention to accomplish a practical application, it must produce a “useful, concrete and tangible result” *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02 (see MPEP 2106.II.A). Currently, the claim does not recite a practical application. In order to for

the claimed product to produce a “useful, concrete and tangible” result, recitation of one or more of the following elements is suggested:

- The manipulation of data that represents a physical object or activity transformed from outside the computer (MPEP 2106 IVB2(b)(i)).
- A physical transformations outside the computer, for example in the form of pre or post computer processing activity (MPEP 2106 IVB2(b)(i)).
- A direct recitation of a practical application in the technological arts (MPEP 2106 IVB2(b)(ii)).

6. Claims 23 and 25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention is so abstract and sweeping as to cover the method if practiced by human operator assisted only by pencil and paper. The claims do not include a particular machine or apparatus, and no machine-implemented steps are recited, the steps are capable of performance by human mind. A method of this sort, traditionally called a mental process, is not patentable subject matter.

A phenomena of nature, though just discovered, mental process, abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work (emphasis added). See *Gottschalk v. Benson*, 175 USPQ 673, 675 (USSC 1972). Also see *In re Prater and Wei*, 159 USPQ 583 (1968), rehearing, 162 USPQ 541 (1969).

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2624

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3, 5, and 7 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant's admitted prior art [see pages 1-9 of the instant specification. Referred as the APA hereinafter].

Regarding claim 1, the APA teaches an image coder which quantizes a predetermined number of orthogonal transformation factors, comprising:

a first scan converter adapted to rearrange the orthogonal transformation factors in a first scan sequence which is different from a zigzag scan sequence and outputting the predetermined number of factors at a time [see last four lines of page 1 and page 2 lines 1-7: the use of orthogonal transformation for outputting orthogonal transformation factors which are rearranged by zigzag scan converter and outputted in twos];

a second scan converter adapted to rearrange quantized orthogonal transformation factors in the zigzag scan sequence and output the rearranged quantized orthogonal transformation factors [see zigzag scan mentioned in lines 17-18 of page 3. Note that this zigzag scan is used for rearranging the results of quantization].

It is noted that clause "adapted to" is recited in claim so the claimed features recited after such clause is a statement of intended use. So, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Ex parte Cullis, 11 USPQ2d 1876 (BPPAI 1989).

Regarding claims 3, 5, and 7, the APA does not explicitly teach odd-numbered samples are arranged in the forward direction from the start of the zigzag scan sequence and even-numbered samples arranged in a reverse direction from an end of the zigzag scan sequence. However, the using of zigzag scanning method in the APA as pointed out in claim 1 above does inherently include such claimed features. In addition, the zigzag scanning used in the APA does refer to the claimed “raster scan sequence” as recited in claims 5 and 7.

9. Claims 1, 3, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. [USPN 5,121,216. Referred as Chen hereinafter].

Regarding claim 1, the Chen teaches an image coder which quantizes a predetermined number of orthogonal transformation factors [see figure 2 and its description mentioned in col. 6 lines 7- 55: note that the so called “predetermined number of orthogonal transformation” is qualified by the “attributes” mentioned in col. 6 line 8, “compression parameter” in col. 6 line 9, the value K mentioned in the cited portion, the “magnitude” in col. 6 line 21, and the “block size” in col. 6 line 48 with the broadest reasonable interpretation] , comprising:

a first scan converter adapted to rearrange the orthogonal transformation factors in a first scan sequence which is different from a zigzag scan sequence and outputting the predetermined number of factors at a time [i.e., the ranked transformation coefficients shown in figure 3 (graph a or b) and described in col. 6 lines 17-24 and 56-60 corresponds to the claimed feature];

a second scan converter adapted to rearrange quantized orthogonal transformation factors in the zigzag scan sequence and output the rearranged quantized orthogonal transformation factors [i.e., the ranked transformation coefficients shown in figure 3 (graph a or b) and described in col. 6 lines 17-24 and 56-60 corresponds to the claimed feature].

It is noted that clause “adapted to” is recited in claim so the claimed features recited after such clause is a statement of intended use. So, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. *Ex parte Cullis*, 11 USPQ2d 1876 (BPPAI 1989).

Regarding claims 3, 5, and 7, the Chen does not explicitly teach odd-numbered samples are arranged in the forward direction from the start of the zigzag scan sequence and even-numbered samples arranged in a reverse direction from an end of the zigzag scan sequence. However, Chen teaches using of zigzag scanning as shown at 28 of figure 2 and it does inherently include such claimed features because it is how zigzag scanning functions.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M. Dang whose telephone number is 571-272-7389. The examiner can normally be reached on Monday to Friday from 6:00AM to 2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C. Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dmd  
8/06



**DUY M. DANG**  
**PRIMARY EXAMINER**